Recent Laboratory Evidence of Benefits From Injection Therapy for Pollinosis

While injection therapy for pollinosis is widespread, scientific proof of efficacy has been difficult to obtain in purely clinical studies because of the subjective nature of symptom reporting and the known beneficial effects of placebo therapy. Recent refinement of the technique of *in vitro* histamine release from peripheral blood leukocytes of allergic persons on exposure to specific allergens provides a means to quantitate and manipulate a process believed to be one necessary step in the development of allergic symptoms *in vivo*.

Grass extract, whole ragweed extract, and the antigen E fraction of ragweed extract have been studied. Following immunotherapy of several months' duration there is significant decrease in the percent of total histamine released by leukocytes on exposure to the corresponding allergen. This leukocyte unresponsiveness parallels a fall in reaginic antibody titer and a rise in blocking antibody levels, and closely correlates with clinical improvement. The profound fall in leukocyte responsiveness cannot be explained solely by the relatively lesser drop in reagin titer; the concomitant rise in serum IgE blocking antibody titer seems to be crucial to clinical improvement.

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The Use of Disodium Cromoglycate In the Treatment of Asthma

"INTAL®," disodium cromoglycate (DSC), a product of Fison's Pharmaceuticals of England, has been on the market for three years in England, Australia and other countries. It is still under investigation in the United States.

This drug, an odorless white powder, is used in the prevention of asthma attacks by a mechanism *not* available in other forms of medication—it is not a bronchodilator, an anti-inflammatory agent, steroid, or antihistamine, but prevents the release of histamine from mast cells.

Twenty milligrams of the drug is given by power inhalation in a special "spinhaler" four times a day. Most clinical trials have reported unequivocal subjective benefit in one-third to one-half of patients with extrinsic asthma. Many patients have been able to decrease their regular doses of bronchodilators, steroids and sympathomimetic inhalors. There have been no reported serious side effects.

Exercise-induced asthma and inhalation-challenge asthma can also be successfully blocked by previous treatment with DSC.

The drug is not effective for treating the acute attack of asthma.

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Immunoglobulin E in Allergic Disease

Reaginic antibodies responsible for immediate type hypersensitivity reactions including classical allergic symptoms have been assigned to a new class of immunoglobulin designated IgE or γE. Present in everyone from shortly after birth, the serum concentrations of IgE slowly increase throughout life. Normal adult sera have a mean level of 0.3 micrograms per ml with a range of 0.1 to 1.4.

Atopic persons have a tendency to higher levels when compared with age-matched controls, but there is considerable overlap. Serum concentrations have been shown to be elevated in a variety of conditions without concomitant allergic symptoms. These include visceral larva migrans syndrome, ascaris infestation and, in lower frequency, celiac disease and Laennec's cirrhosis.

Allergic symptoms are most likely due to the synthesis of IgE antibodies specific for prevalent